

Rocky Flats Citizens Advisory Board Recommendation 98-3

to the U.S. Department of Energy

Comments on the Integrated Monitoring Plan for Rocky Flats

Approved February 5, 1998

Introduction: In 1997, the Rocky Flats Citizens Advisory Board (RFCAB) contracted with the firm, Parker-Hall, Inc., to conduct an independent assessment of the environmental monitoring programs for the Rocky Flats site. After reviewing the final project report from Parker-Hall, RFCAB noted that the comments and recommendations from Parker-Hall fell into three broad categories. The first of these categories are comments based on Parker-Hall's review of the Integrated Monitoring Plan document used by the site to describe the environmental monitoring program at Rocky Flats. In the second category are more specific recommendations calling for changes in the way the monitoring programs are conducted such as installing new monitoring wells, adding additional contaminants to the list of things the site should be looking for in the laboratory, and using different techniques for collecting environmental samples. The third category of recommendations calls for changes in the way in which environmental monitoring information and data is presented to the community.

To address these three categories of comments and recommendations, RFCAB will produce three separate transmittals that will be forwarded to DOE. Outlined below are the first category, the comments prepared by Parker-Hall specific to the Integrated Monitoring Plan. RFCAB asks that DOE and its contractors consider these comments for incorporation into that document.

The second category of more specific recommendations for changes related to the way in which environmental monitoring is conducted will be addressed in a separate RFCAB recommendation. Currently, RFCAB is conducting a dialogue with the site concerning the Parker-Hall recommendations and will wait for the conclusion of that dialogue before transmitting its own set of "official" recommendations. A recommendation specific to the third category dealing with the need for improvements in the way in which environmental monitoring information and data is shared with the community will be transmitted under separate cover concurrent with the comments outlined below.

Groundwater Monitoring Program Comments

- It is likely that multiple wells installed within certain plume areas are used to monitor different groundwater pathways, but the current Integrated Monitoring Plan (IMP) does not state this. Therefore, the purpose of multiple well installations within a plume area should be fully specified

in the Groundwater Monitoring Program Plan to substantiate their intended use.

- Information from Plume Definition and Plume Extent wells will likely be used to determine remediation methods and during remediation can be used to treat, monitor and confirm cleanup activities. This long range anticipated use of the installed wells should be integrated with the stated objectives of the Groundwater Monitoring Program Plan.
- The Groundwater Monitoring Program Plan for each fiscal year should identify all the wells proposed for each cleanup project planned for the year.

The following issues need to be addressed in the Groundwater Monitoring Program Plan:

- The rationale for well installations at three areas, 881 Hillside, 903 Pad, and East Trenches, is not described. There are no descriptions of any source removal / remedial activities performed or planned at these or other areas of the site.
- The rationale for the analyte lists at each site should be presented.
- The basis for deciding contaminant action levels should be described.
- The 1996 Fourth Quarter Rocky Flats Cleanup Agreement (RFCA) Groundwater Monitoring Report lists some analytes that are not included in the Integrated Monitoring Plan (IMP). The Groundwater Monitoring Program Plan should be corrected to reflect the actual analyte list used to monitor the D&D well near Building 886.
- The Groundwater Monitoring Program Plan should be revised to document and justify the number of wells required to sufficiently conduct pre-D&D monitoring.
- The specific statistical methods currently employed for data analysis need to be fully described and justified in the Groundwater Monitoring Program Plan.
- The Groundwater Monitoring Program Plan does not, but should, describe the methodology used to delineate or conduct discrete zone monitoring of certain contaminants. The concern is that the primary target zone for monitoring is the UHSU (Upper Hydrostratigraphic Unit - the shallowest unconfined aquifer), which is suitable for those chemicals less dense than water. However, heavier chemicals such as chlorinated solvents can accumulate into distinct layers in subsurface boundaries.
- At present, only two wells are installed in the LHSU (Lower Hydrostratigraphic Unit) to monitor the potential vertical migration of contaminated groundwater. The rationale for eliminated LHSU wells from the monitoring program is not addressed in the Groundwater Monitoring Program Plan. The justification for not monitoring potential vertical migration of contaminated

groundwater to lower aquifers needs to be clearly explained and documented.

- The natural ability of the groundwater to decrease contaminant concentrations through physical, chemical, and biological processes, and its significance should be addressed in the Groundwater Monitoring Program Plan, particularly the influence on groundwater monitoring and remediation decisions.
- The groundwater should not be evaluated (or remediated) independently of other environmental media. Because contaminated soils are potential sources of contaminants in the groundwater, interactions between contaminated soils and groundwater should be considered. The Groundwater Monitoring Program Plan needs to fully address this issue.

Surface Water Monitoring Program Comments

- The Surface Water Monitoring Program Plan should explicitly describe the Site waste streams that require characterization studies in any given year. The unidentified waste stream referenced in the current program plan should be described in as much detail known. This Plan should be a stand-alone document that fully describes all the elements of each surface water monitoring program in place for the year.
- The Integrated Monitoring Plan states that in the event of a contaminant exceedance at the onsite ponds, the Site would perform monitoring or could consider other management options such as treatment, storage or disposal rather than immediate discharge. The decision process for these responses must be explained and reviewed by the public stakeholders.
- The Uncharacterized Discharge Monitoring program is used to evaluate waters of unknown quality that have been released from the Site, such as during emergency discharge or storm events. The implementation and notification procedures for this program are not described in the IMP Surface Water Monitoring Program document. These procedures need to be explicitly detailed in the Surface Water Monitoring Program Plan. The procedures must include a reporting strategy for timely notification of an uncharacterized release to the downstream communities, identify potential mitigation procedures, and ensure that a contingency budget has been allocated.
- There is a lack of coordination between the 18 separate surface water monitoring programs. The Surface Water Monitoring Program would be improved if all the elements in each program were reviewed for coordination and a standardized analyte list developed for all water samples.
- The Site needs to better coordinate its surface water monitoring planning efforts, and clearly describe in the IMP the process for integrating the 18 different surface water monitoring programs as a whole and the integration with the other monitored environmental media. The lack of integration is particularly evident with the groundwater monitoring program.

- There is no sediment sampling performed in the Surface Water Monitoring Program. It is recommended that routine sediment monitoring be incorporated into the Surface Water Monitoring Program.

Air Monitoring Program Comments

- The data quality objectives and decision rules for air sampling should be clearly identified in the Air Monitoring Program Plan. A clear statement concerning how collected data and other critical inputs are used to demonstrate regulatory compliance and to calculate annual dose estimates is essential.

Project Specific Monitoring Program Comments

- The Project-Specific Monitoring Guidelines document should present a clearly defined process for determining the need for and type of monitoring required for all Site-wide project classes on a project specific basis. It should also identify a reporting process so the public is notified when a specific project will occur, what the objectives are, and the final outcome of the activity.
- The Project-Specific Monitoring process should also be addressed in the annual Integrated Monitoring Plan and reconciled with other Site-wide environmental monitoring programs. The data quality objectives for determining the additional project monitoring needs must be explicitly identified, as well as an appropriate mechanism for early and ongoing consultation with media-specific specialists during the planning process.

The Rocky Flats Citizens Advisory Board is a community advisory group that reviews and provides recommendations on cleanup plans for Rocky Flats, a former nuclear weapons plant outside of Denver, Colorado.

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